

MENINGITIS VIGILANCE FOR AFRICA

Bulletin No. 022

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SUMMARY

- Meningitis cases reported by the WHO during the week 22th were 245 cases with 16 deaths. During the first 22 weeks of 2019, 12146 meningitis cases with 689 deaths was reported over the African meningitis belt.
- Moderate vigilance is required for meningitis cases over northeastern Senegal, southern Mauritania, central Mali, northern Chad, and northern Sudan.
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



FIGURE 1 – African Meningitis Belt.

27th May to 2nd June 2019

SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 22 / EPIDEMIOLOGICAL SITUATION OF WEEK 22

Table 1: Situation épidémiologique / Epidemiological Situation

Pays	Cas	Décès	Létalité (%)	District en Alerte	District en Epidémie	Complétude (%)
Country	Cases	Deaths	CFR (%)	District in Alert	District in Epidemic	Completeness (%)
Benin ^P	3	0	0.0	0	0	100.0
Burkina Faso ^T	11	4	36.4	0	0	100.0
Burundi ^T	7	0	0.0	0	0	100.0
Cameroon ^P	-	-	-	-	-	-
Centrafrique ^P	-	-	-	-	-	-
Côte d'Ivoire ^P	2	0	0.0	0	0	100.0
Ethiopia ^T	-	-	-	-	-	-
Ghana ^P	11	1	9.1	1	0	100.0
Guinée ^P	4	0	0.0	0	0	100.0
Guinée Bissau	-	-	-	-	-	-
Gambia ^T	2	0	0.0	1	0	100.0
Kenya	2	0	0.0	0	0	100.0
Mali ^T	11	0	0.0	0	0	100.0
Mauritania ^P	-	-	-	-	-	-
Niger ^T	10	1	10.0	0	0	100.0
Nigeria ^P	9	0	0.0	0	0	100.0
RD Congo ^{**}	139	7	5.0	-	-	11.7
Senegal ^P	14	0	0.0	1	0	100.0
South Sudan ^P	0	0	0.0	0	0	100.0
Sudan ^T	-	-	-	-	-	-
Tanzania	0	0	0.0	0	0	100.0
Tchad ^T	10	3	30.0	0	0	100.0
Togo ^P	10	0	0.0	0	0	97.7
Uganda ^P	-	-	-	-	-	-
Total	245	16	6.5	3	0	54.8

^P Pays partiellement vacciné avec le MenAfriVac / Country partially vaccinated with MenAfriVac
^T Pays entièrement vacciné avec le MenAfriVac / Country entirely vaccinated with MenAfriVac
^{**} La vaste majorité du territoire de la République démocratique du Congo se situe en dehors de la ceinture africaine de la méningite. Par conséquent, les seuils d'alerte et d'épidémie ne sont pas applicables / The majority of the Democratic Republic of the Congo territory is situated outside the African meningitis belt. Thus the alert and epidemic thresholds are not applicable

FIGURE 2 – Inventory of meningitis occurrence in Africa during the 22nd week of the year, 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-22-2019.pdf?ua=1>

(Semaines notifiées / Reported weeks 01 - 22)

Table 2: SYNTHÈSE DE LA SITUATION EPIDEMIOLOGIQUE / Summary of the Epidemiological situation

Pays	Cas	Décès	Létalité (%)	District en Alerte	District en Epidémie	Semaines notifiées	En districts (%)	En semaines (%)
Country	Cases	Deaths	CFR (%)	District in Alert	District in Epidemic	Reported weeks	In districts (%)	In weeks (%)
Benin ^P	215	20	9.3	4	0	01-22	100.0	100.0
Burkina Faso ^T	1 684	125	7.4	10	0	01-22	100.0	100.0
Burundi ^T	97	1	1.0	0	0	01-22	100.0	100.0
Cameroon ^P	332	14	4.2	8	0	01-18	95.8	93.0
Centrafrique ^P	285	34	11.9	7	0	01-21	94.3	89.8
Côte d'Ivoire ^P	100	5	5.0	0	0	01-22	100.0	99.8
Ethiopia ^T	1 219	7	0.6	-	-	01-21	100.0	99.9
Ghana ^P	700	20	2.9	16	4	01-22	100.0	100.0
Guinée	190	5	2.6	0	0	01-22	100.0	100.0
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia ^T	18	1	5.6	3	0	01-22	100.0	100.0
Kenya	97	2	2.1	2	0	01-22	100.0	100.0
Mali ^T	288	2	0.7	0	0	01-22	100.0	99.9
Mauritania ^P	0	0	0.0	0	0	01-21	100.0	100.0
Niger ^T	683	59	8.6	3	0	01-22	100.0	100.0
Nigeria ^P	1 308	65	5.0	6	2	01-22	100.0	100.0
RD Congo ^{**}	3 465	244	7.0	-	-	01-22	17.7	84.5
Senegal	223	1	0.4	1	0	01-22	100.0	100.0
South Sudan ^P	62	10	16.1	4	0	01-22	100.0	100.0
Sudan ^T	12	0	0.0	0	0	01-21	100.0	100.0
Tanzania	12	6	50.0	0	0	01-22	100.0	100.0
Tchad ^T	694	57	8.2	9	1	01-22	100.0	99.9
Togo ^P	462	11	2.4	2	2	01-22	97.7	98.1
Uganda ^P	-	-	-	-	-	-	-	-
Total	12 146	689	5.7	75	9	01-22	85.1	99.2

FIGURE 3 – Inventory of meningitis occurrence in Africa during the first twenty second weeks of year 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-22-2019.pdf?ua=1>

Figure 4 shows the mean relative humidity at 1000 hPa estimated from NCEP reanalysis during 9 – 15 June 2019 period. It indicates that the very dry atmospheric conditions (relative humidity below 20 %) was located over eastern Mauritania, northwestern Mali, Algeria, northwestern Niger, southern Libya, northern Chad, northern Sudan, and southern Egypt. The Atlantic inflow associated with northwesterly wind (see Figure 6) moistened atmospheric conditions over western Mauritania and northwestern Senegal (relative humidity between 20 and 60 %). Very wet atmospheric conditions (relative humidity above 60 %) prevailed over the Gulf of Guinea countries, Tanzania, Burundi, Somalia, Kenya, Ethiopia, Uganda and Rwanda.

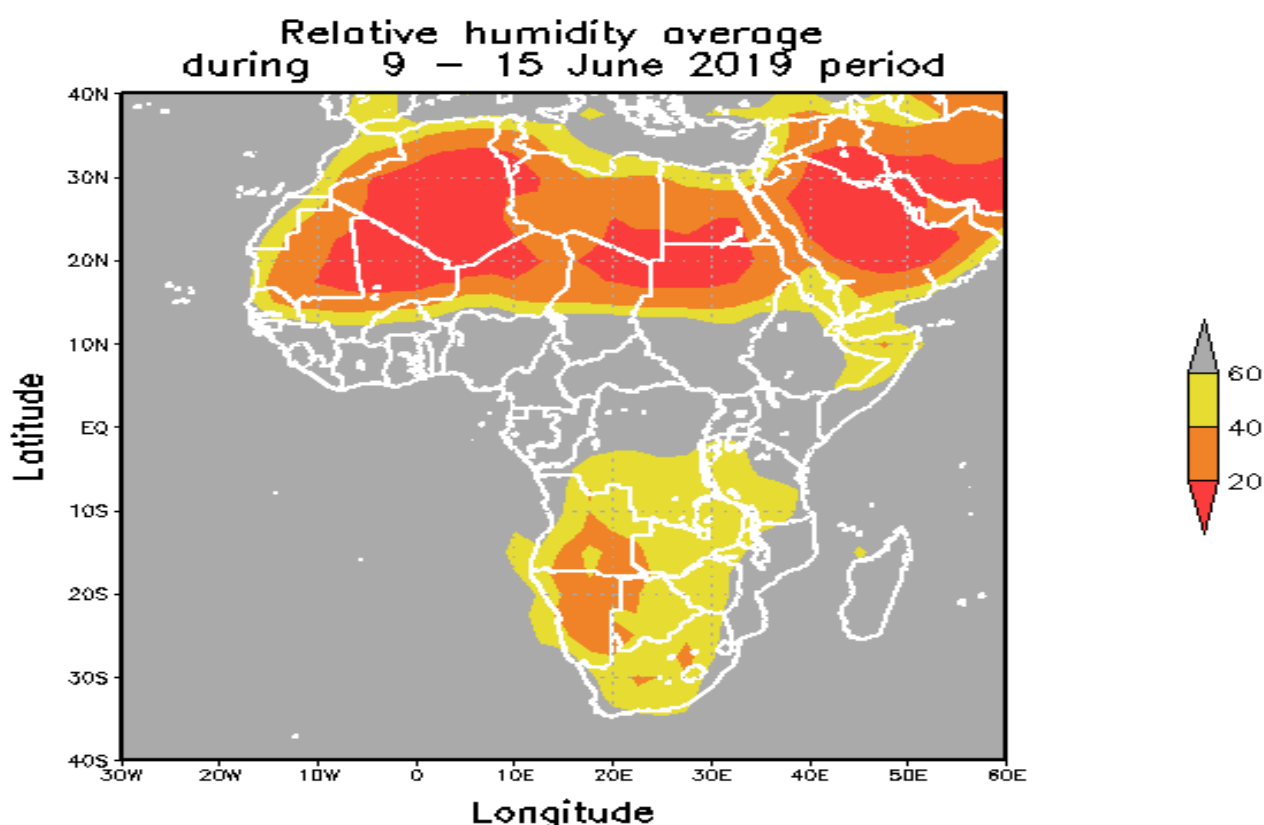


FIGURE 4 – Mean relative humidity (%) for the period 9 – 15 June 2019 estimated from NCEP reanalysis at 1000 hPa.

Figure 5 shows the mean surface dust concentrations prospected using Goddard Earth Observing Model (GEOS) during the period from 9 to 15 June, 2019. Highest values of surface dust concentrations observed over the meningitis belt prevailed over the Sahel during this period. Dusty atmospheric conditions prevailed over northeastern Senegal, western and southern Mauritania and due to the intensification of the northwesterly wind from Azores High. High values of dust concentrations were also observed over northern Mali, parts of Algeria, Libya, eastern Niger, central Chad, and northern Sudan. Moderate or low surface dust concentrations remained over the rest of the remaining part of the meningitis belt.

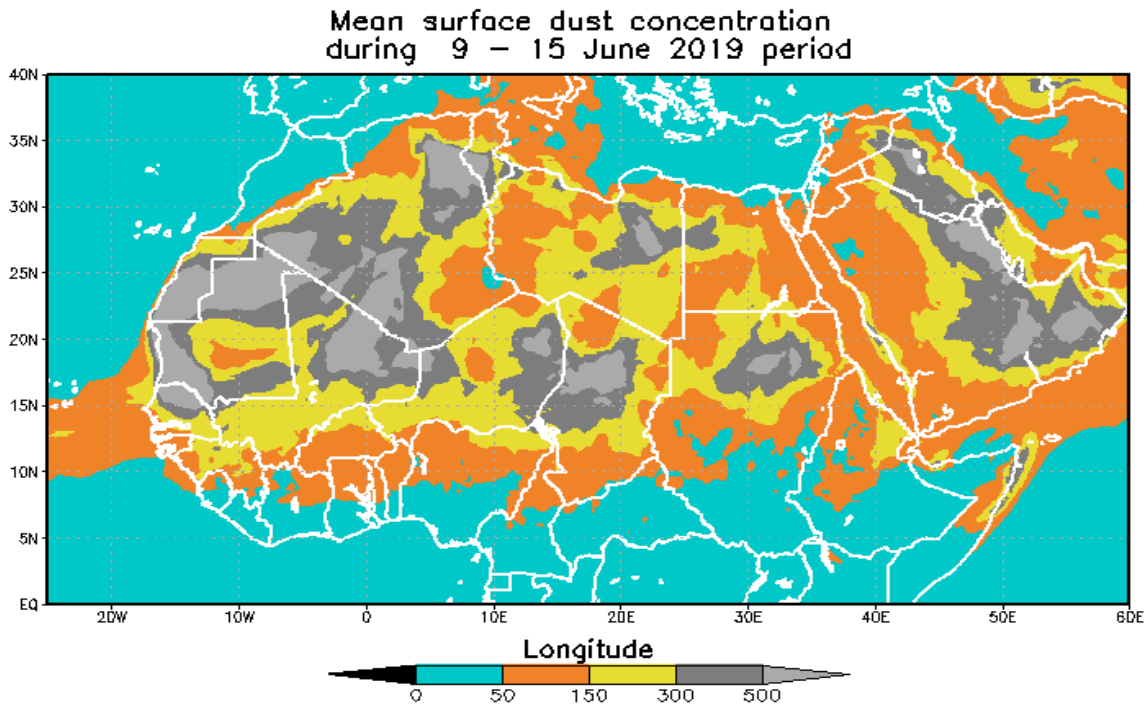


FIGURE 5 – Mean surface dust concentration ($\mu\text{g m}^3$) forecasted during the week from 9 to 15 June, 2019 from Goddard Earth Observing Model (GEOS) data.

Figure 6 presents the mean meridional wind speed at 1000 hPa during the period from 9 to 15 June 2019. It shows that the ITD position was located on average over central Senegal, southern Mauritania, central Mali, central Niger, central Chad, and central Sudan. During this week, the ITD moved to the southward over eastern Sahel. Harmattan flow favoring the increase of meningitis cases prevailed over Mauritania, northern Mali, northern Niger, northern Chad, and northern Sudan.

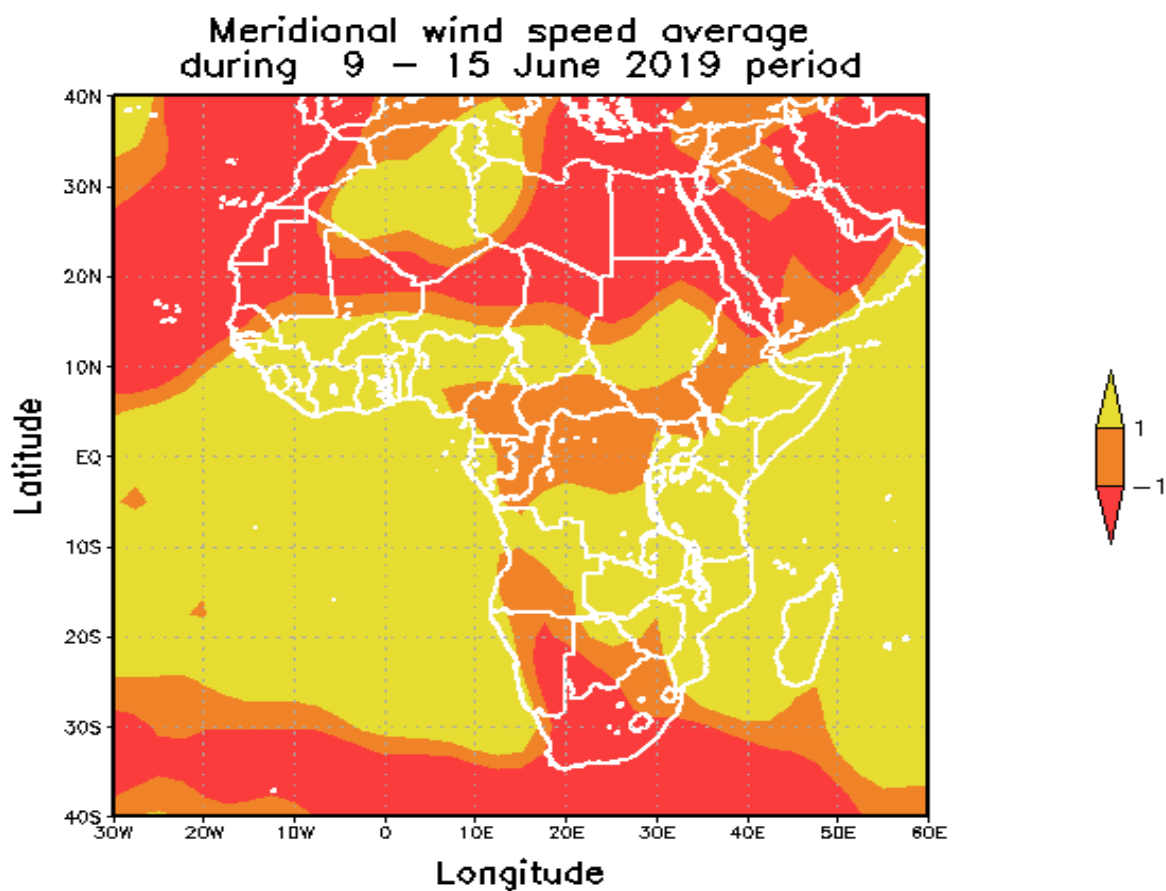


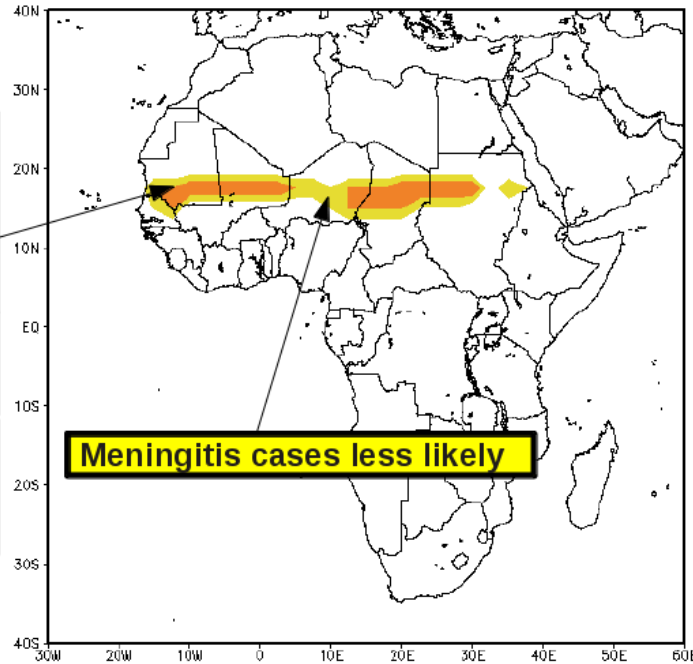
FIGURE 6 – Mean meridional wind speed (m s^{-1}) for the period 2 – 8 June 2019 estimated from NCEP reanalysis at 1000 hPa.



VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA
ISSUED ON JUNE 18, 2019



HAZARD Dust, wind and relative humidity conditions are favorable for emergence of meningitis cases
POTENTIAL IMPACTS Meningitis cases very likely
MEASURES Activation of meningitis surveillance and systems



HAZARD Dust, wind and relative humidity conditions are very much favorable for emergence of meningitis cases
POTENTIAL IMPACTS Meningitis cases very likely and epidemics status possible
MEASURES Strengthen meningitis surveillance and systems